

IN THE CLAIMS: ✓

Please CANCEL claims 3 and 18 without prejudice to or disclaimer of the recited subject matter recited therein.

Please AMEND claims 1, 9, 12-14, 16, 20, 21, 23, 24, 27 and 28, and ADD new claims 34 and 35, as follows. For the Examiner's convenience, all claims currently under consideration in this application have been reproduced below:

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B' 1. (Currently Amended) A semiconductor manufacturing apparatus comprising:

a chamber enclosing a main body of said semiconductor apparatus;

purging means for purging inert gas in an a predetermined area inside an said  
chamber;

~~decision means for deciding start of a maintenance operation inside the chamber;~~

setting means for setting a maintenance mode;

a panel for maintenance, provided in an outer wall of said chamber;

a sensor for detecting an opening of said panel; and

~~supply means for supplying a prescribed area inside the chamber with clean, dry~~  
~~air, if the start of the maintenance operation has been decided by said decision means~~ clean, dry  
air based on an output of said sensor, when the maintenance mode has been set by said setting  
means.

2. (Previously Cancelled)

3. (Cancelled)

4. (Original) The apparatus according to claim 1, further comprising:

determination means for determining whether an environment in the prescribed area of the chamber has attained a safe level; and

notification means for giving notification of results of the determination based upon said results.

5. (Original) The apparatus according to claim 4, wherein said determination means includes a first sensor for sensing oxygen concentration, said first sensor being provided inside or in the vicinity of the prescribed area.

6. (Original) The apparatus according to claim 4, wherein said determination means includes a second sensor for sensing ozone concentration, said second sensor being provided inside or in the vicinity of the prescribed area.

7. (Original) The apparatus according to claim 4, further comprising a fan provided in the vicinity of the prescribed area for being driven at least for a period of time during which said determination means determines that the environment in the prescribed area is not at a safe level.

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8. (Original) The apparatus according to claim 1, further comprising:

determination means for measuring concentration of a predetermined gas component in an environment in the prescribed area of the chamber, thereby determining whether the environment is at a safe level; and

a monitor for displaying results of measurement by said determination means.

9. (Currently Amended) The apparatus according to claim 1, wherein said decision means decides a start of the maintenance operation inside the chamber if a command for transition to a maintenance mode has been entered via a control console.

10. (Original) The apparatus according to claim 1, further comprising:

determination means for determining whether an environment in the prescribed area of the chamber has attained a safe level; and

a lock mechanism for locking a cover, which is provided in an outer wall of the chamber, if said determination means determines that the environment is not at the safe level, and unlocking the cover if said determination means determines that the environment is at the safe level.

11. (Original) The apparatus according to claim 1, wherein a plurality of prescribed areas have been established inside the chamber, and said supply means has a gas supply unit for each of the plurality of prescribed areas.

12. (Currently Amended) The apparatus according to claim 11, wherein said decision means decides a start of the maintenance operation for each of the plurality of prescribed areas.

13. (Currently Amended) The apparatus according to claim 12, wherein said supply means executes supply of the gas from whichever of the supply units corresponds to a prescribed area for which the start of the maintenance operation has been decided by said decision means.

14. (Currently Amended) The apparatus according to claim 1, further comprising a display, a network interface and a computer for running network access ~~software~~; software, wherein maintenance information is communicated via a network.

15. (Original) The apparatus according to claim 14, wherein the network access software provides said display with a user interface for accessing a maintenance database provided by a vendor or user of the semiconductor manufacturing apparatus, thereby making it possible to obtain information from said database via the Internet or a leased-line network connected to said network.

16. (Currently Amended) A method of controlling a semiconductor manufacturing apparatus, said method comprising:

a purging step of purging inert gas in an a predetermined area inside a chamber enclosing a main body of the semiconductor manufacturing apparatus;

a ~~decision~~ setting step of ~~deciding start of a maintenance operation inside the~~  
~~chamber~~ setting a maintenance mode; and

a supply step of supplying ~~a prescribed area inside the chamber with clean, dry air,~~  
~~if the start of the maintenance operation has been decided by said decision step~~ clean, dry air  
based on an output of a sensor that detects an opening in a maintenance panel, the panel being  
provided in an outer wall of the chamber, when the maintenance mode has been set in said  
setting step.

17. (Previously Cancelled)

18. (Cancelled)

19. (Original) The method according to claim 16, further comprising:

a determination step of determining whether an environment in the prescribed area  
of the chamber has attained a safe level; and

a notification step of giving notification of results of the determination based upon  
said results.

20. (Currently Amended) The method according to claim 19, wherein said determination  
step determines whether the environment is at a safe level based upon results of sensing by a

sensor for sensing oxygen concentration, ~~said~~ the sensor being provided inside or in the vicinity of the prescribed area.

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21. (Currently Amended) The method according to claim 19, wherein said determination step determines whether the environment is at a safe level based upon results of sensing by a sensor for sensing ozone concentration, ~~said~~ the sensor being provided inside or in the vicinity of the prescribed area.

22. (Original) The method according to claim 19, further comprising a driving step of driving a fan provided in the vicinity of the prescribed area for at least for a period of time during which said determination step determines that the environment in the prescribed area is not at a safe level.

23. (Currently Amended) The method according to claim 1, further comprising:

- a determination step of measuring concentration of a predetermined gas component in an environment in the prescribed area of the chamber, thereby determining whether the environment is at a safe level; and
- a display step of displaying results of the measurement ~~on a monitor by~~ in said determination step on a monitor.

24. (Currently Amended) The method according to claim 16, wherein said ~~decision~~ setting step decides a start of the maintenance operation inside the chamber if a command for transition to a maintenance mode has been entered via a control console.

25. (Original) The method according to claim 16, further comprising:

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a determination step of determining whether an environment in the prescribed area of the chamber has attained a safe level; and

a lock control step of locking a cover, which is provided in an outer wall of the chamber, if said determination step determines that the environment is not at the safe level, and unlocking the cover if said determination step determines that the environment is at the safe level.

26. (Original) The method according to claim 16, wherein a plurality of prescribed areas have been established inside the chamber, and said supply step supplies a gas from a supply unit provided for each of the plurality of prescribed areas.

27. (Currently Amended) The method according to claim 26, wherein said ~~decision~~ setting step decides a start of the maintenance operation for each of a plurality of prescribed areas.

28. (Currently Amended) The apparatus according to claim 27, wherein said supply step executes supply of the gas from whichever of the supply units corresponds to a prescribed area for which a start of the maintenance operation has been decided by said decision step.

29. (Withdrawn) A method of manufacturing devices, comprising steps of:

placing a plurality of semiconductor manufacturing apparatus in a plant; and

manufacturing a semiconductor device using said plurality of semiconductor manufacturing apparatus;

wherein at least one of said semiconductor manufacturing apparatus includes:

decision means for deciding start of a maintenance operation inside a chamber;

and

supply means for supplying a prescribed area inside the chamber with a gas that contains oxygen if start of the maintenance operation has been decided by said decision means.

30. (Withdrawn) The method according to claim 29, further comprising the steps of:

connecting said plurality of semiconductor manufacturing apparatus by a local-area network;

connecting said local-area network and an external network outside the plant;

acquiring information concerning at least one of said semiconductor manufacturing apparatus from a database on the external network utilizing said local-area network and said external network; and



controlling said at least one manufacturing apparatus base upon the information acquired.

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31. (Withdrawn) The method according to claim 30, wherein maintenance information for said semiconductor manufacturing apparatus is obtained by accessing, by data communication via the external network, a database provided by a manufacturer of a semiconductor device or by a user of said manufacturing apparatus, or production management is performed by data communication with a semiconductor manufacturing plant other than the first mentioned semiconductor manufacturing plant via the external network.

32. (Withdrawn) A semiconductor manufacturing plant, comprising:

- a plurality of items of semiconductor manufacturing apparatus;
- a local-area network for interconnecting said plurality of semiconductor manufacturing apparatus; and
- a gateway for connecting said local-area network and an external network outside of said semiconductor manufacturing plant;

wherein at least one of said semiconductor manufacturing apparatus includes:

- decision means for deciding start of a maintenance operation inside a chamber;

and

- supply means for supplying a prescribed area inside the chamber with a gas that contains oxygen if start of the maintenance operation has been decided by said decision means.

33. (Withdrawn) A method of maintaining a semiconductor manufacturing apparatus, comprising the steps of:

preparing a database, which stores information relating to maintenance of said semiconductor manufacturing apparatus, on an external network outside a plant at which said X-ray exposure apparatus has been installed;

B1 connecting said X-ray exposure apparatus to a local-area network inside said plant; and

maintaining said X-ray exposure apparatus, based upon information that has been stored in said database, utilizing said external network and said local-area network;

wherein said semiconductor manufacturing apparatus includes:

decision means for deciding start of a maintenance operation inside a chamber;

and

supply means for supplying a prescribed area inside the chamber with a gas that contains oxygen if start of the maintenance operation has been decided by said decision means.

34. (New) The apparatus according to claim 1, wherein said semiconductor apparatus is a semiconductor exposure apparatus.

35. (New) The apparatus according to claim 1, wherein the predetermined area is at least one of an area inside a chamber of a semiconductor exposure apparatus, an area inside an illumination optical system, and an area inside a projection optical system.

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